

## General

### Title

Advanced chronic kidney disease (CKD): percent of patients with measurement of body weight and serum albumin within the last 3 months.

### Source(s)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

## Measure Domain

### Primary Measure Domain

#### Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### Secondary Measure Domain

Does not apply to this measure

## Brief Abstract

### Description

This measure assesses the percent of patients with advanced chronic kidney disease (CKD) with measurement of body weight and serum albumin within the last three months.

### Rationale

Nutritional interventions are commonly advised for patients with chronic kidney disease (CKD). A major goal of these interventions is to retard the progression of kidney disease and therefore delay the need for renal replacement therapy (RRT). To achieve this goal, the standard recommendation has been to restrict the intake of dietary protein, especially animal protein. This recommendation is based on animal studies that have shown that higher dietary intakes of protein can accelerate the progression of CKD, and in turn,

restriction of dietary protein intake has been shown to slow progression of CKD. Another major goal of low-protein diets (LPDs) is to reduce the symptoms of uremia, metabolic acidosis and hyperphosphatemia that occur as CKD inevitably progresses.

Results from higher quality studies in humans with CKD are inconclusive regarding the beneficial effects of these diets on the progression of kidney disease; they also suggest that patients on lower protein diets may be at risk for malnutrition. For these reasons, the use of low-protein diets in CKD patients remains controversial.

Nutritional interventions have several other important goals. Regardless of prescribed diet, CKD patients are at risk for malnutrition, generally because of inadequate energy and protein intake resulting from decreased appetite. Therefore, many nutritional interventions recommend an increase in energy intake. Another goal is prevention of hyperphosphatemia; therefore it is often recommended that CKD patients restrict intake of organic and inorganic phosphates. Other nutritional interventions focus on the prevention of bone disease, vitamin and mineral deficiencies, and hyperlipidemia.

Three large and three small observational studies have demonstrated that patients with advanced CKD are at risk for malnutrition (decline in body weight, serum albumin and other markers), and that this risk increases as GFR declines. Furthermore, low serum albumin has been associated with increased mortality in end-stage renal disease (ESRD).

## Primary Clinical Component

Advanced chronic kidney disease; nutritional status; body weight measurement; serum albumin measurement

## Denominator Description

The number of adult patients with advanced chronic kidney disease (CKD), not currently receiving renal replacement therapy

## Numerator Description

The number of patients from the denominator with measurement of body weight and serum albumin within the last three months (90 days)

## Evidence Supporting the Measure

### Evidence Supporting the Criterion of Quality

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

A systematic review of the clinical literature

## Evidence Supporting Need for the Measure

### Need for the Measure

Unspecified

## State of Use of the Measure

### State of Use

Pilot testing

### Current Use

Internal quality improvement

## Application of Measure in its Current Use

### Care Setting

Ambulatory Care

Physician Group Practices/Clinics

### Professionals Responsible for Health Care

Physicians

### Lowest Level of Health Care Delivery Addressed

Individual Clinicians

### Target Population Age

Age greater than or equal to 18 years

### Target Population Gender

Either male or female

### Stratification by Vulnerable Populations

Unspecified

## Characteristics of the Primary Clinical Component

### Incidence/Prevalence

Unspecified

# Association with Vulnerable Populations

Unspecified

## Burden of Illness

Three large and three small observational studies have demonstrated that patients with advanced chronic kidney disease (CKD) are at risk for malnutrition (decline in body weight, serum albumin, and other markers), and that this risk increases as glomerular filtration rate (GFR) declines. Furthermore, low serum albumin has been associated with increased mortality in end-stage renal disease (ESRD).

## Evidence for Burden of Illness

Abdullah MS, Wild G, Jacob V, Milford-Ward A, Ryad R, Zanaty M, Ali MH, el Nahas AM. Cytokines and the malnutrition of chronic renal failure. *Miner Electrolyte Metab.* 1997;23(3-6):237-42. [PubMed](#)

Gentile MG, Fellin G, Manna GM, D'Amico G. Effects of dietetic manipulation on the control of blood pressure and on the progression of chronic renal insufficiency. *Scand J Urol Nephrol.* 1988;108:13-5. [PubMed](#)

Greene T, Bourgoignie JJ, Habwe V, Kusek JW, Snetselaar LG, Soucie JM, Yamamoto ME. Baseline characteristics in the Modification of Diet in Renal Disease Study [corrected and republished article originally printed in *J Am Soc Nephrol* 1993 May;3(11):1819-34]. *J Am Soc Nephrol.* 1993 Nov;4(5):1221-36. [28 references] [PubMed](#)

Kopple JD, Greene T, Chumlea WC, Hollinger D, Maroni BJ, Merrill D, Scherch LK, Schulman G, Wang SR, Zimmer GS. Relationship between nutritional status and the glomerular filtration rate: results from the MDRD study. *Kidney Int.* 2000 Apr;57(4):1688-1703. [PubMed](#)

Lowrie EG, Huang WH, Lew NL. Death risk predictors among peritoneal dialysis and hemodialysis patients: a preliminary comparison. *Am J Kidney Dis.* 1995 Jul;26(1):220-8. [PubMed](#)

Woodrow G, Oldroyd B, Turney JH, Tompkins L, Brownjohn AM, Smith MA. Whole body and regional body composition in patients with chronic renal failure. *Nephrol Dial Transplant.* 1996 Aug;11(8):1613-8. [PubMed](#)

## Utilization

Unspecified

## Costs

Unspecified

# Institute of Medicine (IOM) Healthcare Quality Report Categories

## IOM Care Need

## IOM Domain

Effectiveness

# Data Collection for the Measure

## Case Finding

Users of care only

## Description of Case Finding

Adult patients 18 years and older with advanced chronic kidney disease (CKD)

## Denominator Inclusions/Exclusions

### Inclusions

Adult patients age 18 years and older with chronic kidney disease stage 4 or 5 (glomerular filtration rate [GFR] less than or equal to 30 mL/min/1.73 m<sup>2</sup>), not currently receiving renal replacement therapy

### Exclusions

Unspecified

## Relationship of Denominator to Numerator

All cases in the denominator are equally eligible to appear in the numerator

## Denominator (Index) Event

Clinical Condition

## Denominator Time Window

Time window precedes index event

## Numerator Inclusions/Exclusions

### Inclusions

The number of patients from the denominator with measurement of body weight and serum albumin within the last three months (90 days)

### Exclusions

Unspecified

## Measure Results Under Control of Health Care Professionals, Organizations and/or Policymakers

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

## Numerator Time Window

Fixed time period

## Data Source

Administrative data

Laboratory data

Medical record

## Level of Determination of Quality

Individual Case

## Pre-existing Instrument Used

Unspecified

## Computation of the Measure

### Scoring

Rate

### Interpretation of Score

Better quality is associated with a higher score

### Allowance for Patient Factors

Unspecified

### Standard of Comparison

Internal time comparison

## Evaluation of Measure Properties

### Extent of Measure Testing

Unspecified

# Identifying Information

## Original Title

Number of patients with measurement of body weight and serum albumin within the last 3 months / number of patients with advanced CKD.

## Measure Collection Name

Renal Physicians Association Clinical Performance Measures on Appropriate Patient Preparation for Renal Replacement Therapy

## Measure Set Name

Clinical Performance Measures for Nutrition Recommendations

## Submitter

Renal Physicians Association - Medical Specialty Society

## Developer

Renal Physicians Association - Medical Specialty Society

## Funding Source(s)

Ortho Biotech Products, LP

## Composition of the Group that Developed the Measure

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## Financial Disclosures/Other Potential Conflicts of Interest

There were none disclosed.

## Adaptation

Measure was not adapted from another source.

## Release Date

2002 Oct

## Measure Status

This is the current release of the measure.

## Source(s)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

## Measure Availability

The individual measure, "Number of patients with measurement of body weight and serum albumin within the last 3 months / number of patients with advanced CKD," is published in "Renal Physicians Association Clinical Practice Guideline #3: Appropriate Patient Preparation for Renal Replacement Therapy."

For more information, contact RPA at 1700 Rockville Pike, Suite 220, Rockville, MD 20852; phone: 301-468-3515; fax: 301-468-3511; Web site: [www.renalmd.org](http://www.renalmd.org) ; e-mail: [rpa@renalmd.org](mailto:rpa@renalmd.org).



## NQMC Status

This NQMC summary was completed by ECRI on May 23, 2003. The information was verified by the Renal Physicians Association on June 17, 2003.

## Copyright Statement

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For more information, contact RPA at 1700 Rockville Pike, Suite 220, Rockville, MD 20852; phone: 301-468-3515; fax: 301-468-3511; Web site: [www.renalmd.org](http://www.renalmd.org) ; e-mail: [rpa@renalmd.org](mailto:rpa@renalmd.org).

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